

## Fresno to Bakersfield Project EIR/EIS Alternatives Analysis Workshop

Tuesday, October 13, 2009

This Alternatives Analysis workshop was convened to finalize the set of alternatives to be considered in the environmental review process for the Fresno to Bakersfield section of the project. It provided an opportunity for the entire Project Team (Authority, FRA, AG's Office, and PMT) to review work prepared by the Fresno-Bakersfield Regional Consultant (RC) and their findings. To inform the discussion, RC managers for each of three sub-sections (Fresno, Rural, and Bakersfield) presented the findings of their respective studies. Following each of the sub-section presentations, the RC Team summarized key decision points and corresponding recommendations for each segment and requested direction from the Project Team on each point.

**Fresno Sub-Section.** The Project Team considered twelve alternative alignments through urban Fresno – combinations of route, vertical profile (elevation), and route leading to Bakersfield (**See Table 1 and Fresno Sub-Section Map**). Ultimately, two route alignments were chosen through Fresno for detailed study, one immediately east and one immediately west of the existing Union Pacific RR corridor. Of the two vertical profile options considered (elevated and mixed elevated and at-grade), the continuously elevated profile was chosen as least disruptive to the community and existing infrastructure (especially freeways and roads).

**Table 1: Fresno Sub-Section Alignment Alternatives**

Vertical Profile	Connection South to Bakersfield	Horizontal Alignment		
		UPRR West	UPRR East	Golden State Boulevard
Elevated	Via BNSF	B1	B2	B3
	Via Visalia*	B4	B5	B6
At-Grade	Via BNSF	B7	B8	B9
	Via Visalia	B10	B11	B12

\* Visalia corridor removed from consideration during Rural sub-section discussion.  
(Note: Shaded alternatives not carried forward)

Finally, an alignment variation or “hybrid” between the proposed station location in downtown and the Union Pacific yard at Clinton Avenue was defined for further study. This “Avoidance Alternative” was added to the alignments for analysis in order to avoid important historical and recreational resources.

**Rural Sub-Section (Between Fresno and Bakersfield).** The Project Team considered two corridors, three route alignment alternatives, and a number of local and special options in various places between urban Fresno and urban Bakersfield (**See Table 2 and Rural Sub-Section Map**). A corridor adjacent to the BNSF Railway was chosen over one by way of Visalia, immediately west of SR-99. The BNSF Corridor was judged to create fewer impacts and greater operational benefits than the corridor via Visalia, while at the same time conforming to the Program EIR/EIS Preferred Alignment and still supporting a station site to serve the Visalia/Tulare/Hanford region. Two alignment alternatives west of the BNSF were combined, while a third option east of BNSF (and SR-43) was dropped due to its greater impacts, cost and complexity with no offsetting benefit. Elevated and bypass options through/around Corcoran, Wasco and Shafter were retained, while at-grade options were not recommended for further study. As well, the original Program Preferred Alignment west of Hanford was

removed from further consideration in favor of an alignment east of Hanford, due to greater local impacts and lack of a station site to serve the Visalia/Tulare/Hanford region.

**Table 2: Rural Sub-Section Alignment Alternatives**

Corridor	Orientation to BNSF Corridor		
	West Side - Shared Right-Of-Way	West Side - Separate Alignment	East Side - Separate Alignment
BNSF	C1	C2	C3
Via Visalia*	C4	C5	C6

\*Portions C4, C5 and C6 lie within the Visalia and BNSF corridors.

(Note: Shaded alternatives not carried forward)

Finally, a new alignment was defined for study. This Avoidance Alternative was added to the alignments for analysis in order to avoid important public recreational, historic, and wildlife resources in the areas of Allensworth State Historical Park and Pixley National Wildlife Refuge, between Corcoran and Wasco.

**Bakersfield Sub-Section.** The Project Team considered two main route alternatives through Bakersfield, one with variations in central Bakersfield, one with variations in east Bakersfield, and both on similar but distinct paths through west Bakersfield (**See Table 3 and Bakersfield Sub-Section Map**). Both alternatives and their variations are elevated throughout urban Bakersfield. Both main alignments were retained; however, a variation located directly above the BNSF mainline tracks in central Bakersfield was eliminated due to excessive cost and construction complexity without offsetting benefit (e.g., reduced impact). Also, a variation in east Bakersfield that would have required crossing the Union Pacific RR Kern Junction yard and mainline was not carried forward for similar reasons. Both remaining alignments provide for a station to be constructed near the existing Amtrak station, though at different locations a few hundred feet apart.

**Table 3: Bakersfield Sub-Section Alignment Alternatives**

Affected Area	Alignment Alternative		
	D1	D2	
West Bakersfield	South of Flying J Refinery	South of Flying J Refinery	
Central Bakersfield	Through BNSF Yard	North of BNSF Yard	Over BNSF Mainline
East Bakersfield	North of UPRR Mainline	South of UPRR Mainline/Edison Hwy (Same Alignment for D1 and D2)	

(Note: Shaded alternatives not carried forward)

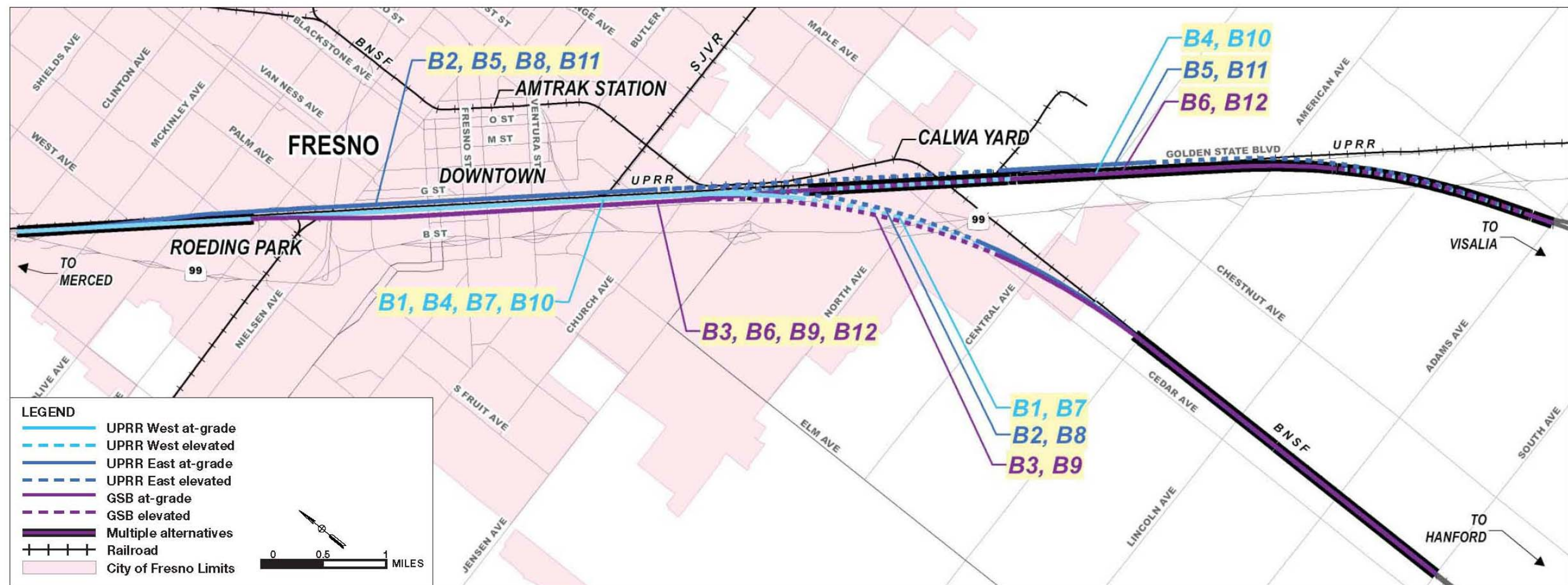
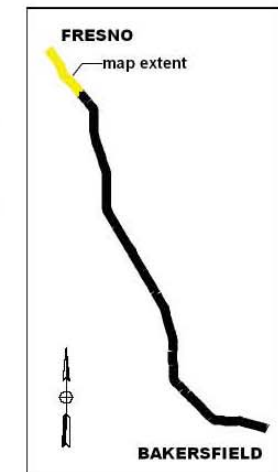
All of the alternatives carried forward for the Fresno to Bakersfield project are shown on the overview map entitled “Alternatives Carried Forward – October 2009.”

## Sub-Section Maps:

Attached on the following pages.

# ALTERNATIVES CONSIDERED – OCTOBER 2009

		UPRR WEST	UPRR EAST	GOLDEN STATE BOULEVARD
ELEVATED STATION	BNSF south of Fresno	B1	B2	B3
	UPRR south of Fresno	B4	B5	B6
AT-GRADE STATION	BNSF south of Fresno	B7	B8	B9
	UPRR south of Fresno	B10	B11	B12



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## FRESNO SUBSECTION





# ALTERNATIVES CONSIDERED – OCTOBER 2009

## Primary Alternatives

### BNSF Corridor and Hanford East

- C1 - Shared Right-of-way
- C2 - Separate side alignment
- C3 - East side alignment

### Visalia Corridor

- C4 - Shared Right-of-way
- C5 - Separate side alignment
- C6 - East side alignment

## Local Options

### Folwer, Selma, Kingsburg

- CBPA - Wide bypass
- CBPB - Near bypass

### Visalia Options

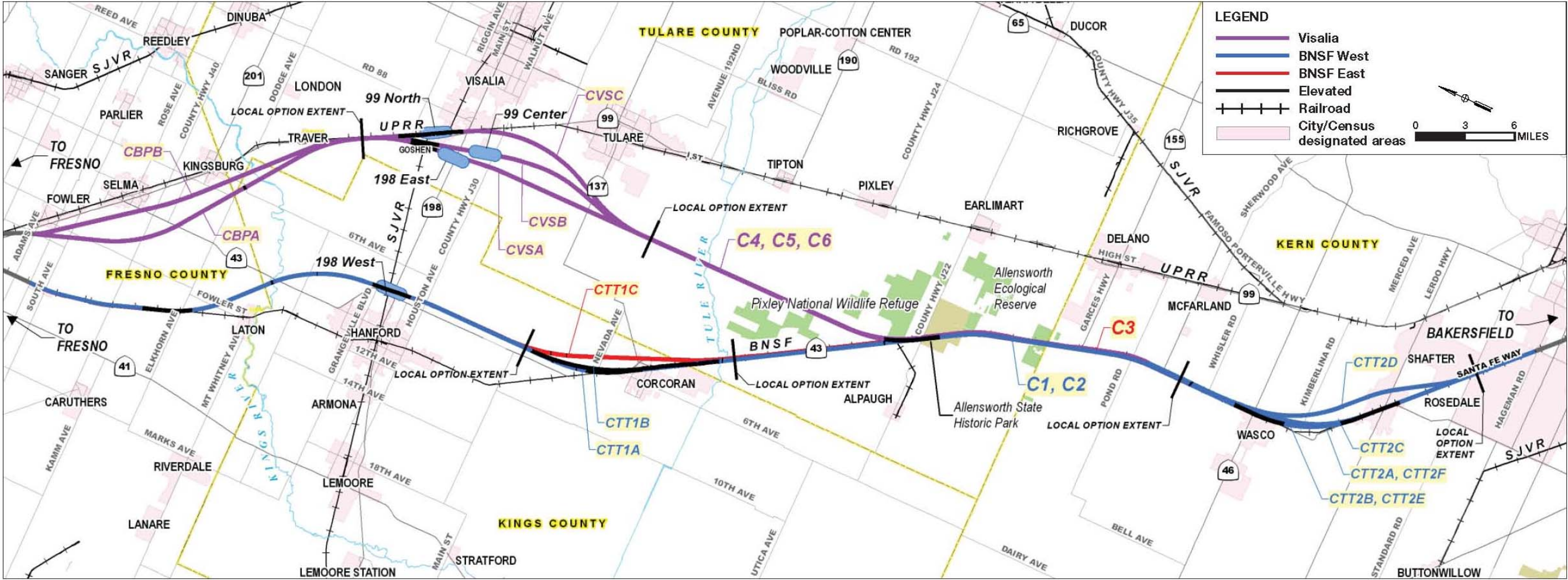
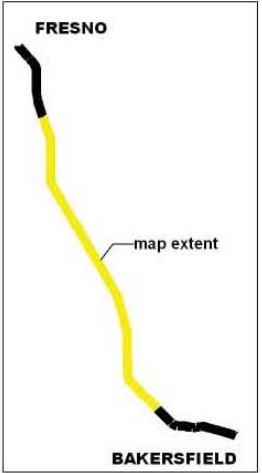
- CVSA - 198 East
- CVSB - 99 Center
- CVSC - 99 North

### Corcoran

- CTT1A/1B - Through Corcoran
- CTT1C - Corcoran Bypass

### Wasco and Shafter

- CTT2A - Through Wasco and Shafter, at grade
- CTT2B - Through Wasco and Shafter, elevated
- CTT2C - Wasco Bypass, Through Shafter
- CTT2D - Wasco and Shafter Bypass
- CTT2E - Through Wasco elevated, Shafter at-grade
- CTT2F - Through Wasco at-grade, Shafter elevated



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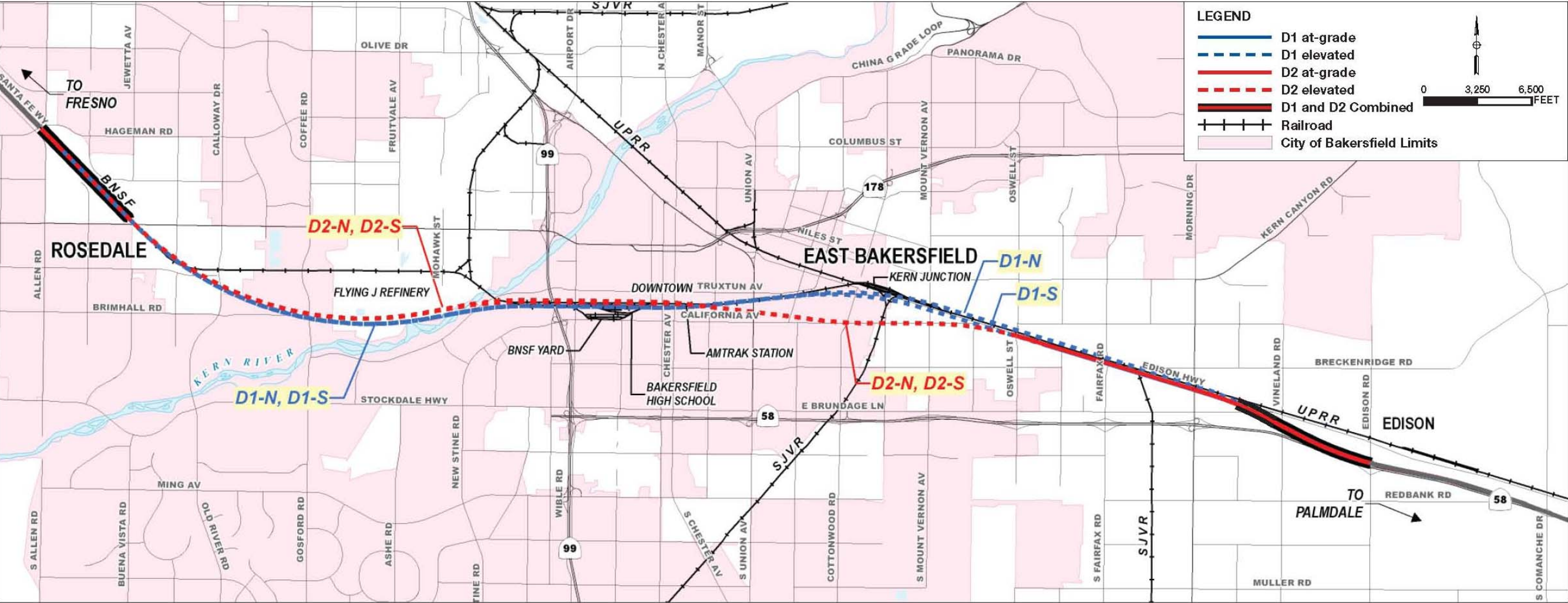
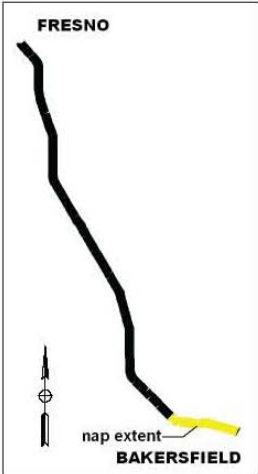
**RURAL SUBSECTION**





# ALTERNATIVES CONSIDERED – OCTOBER 2009

	D1	D2
West Bakersfield	South of Flying J Refinery	
Central Bakersfield	South of BNSF	N - North of BNSF      S - Over BNSF
East Bakersfield	N - North of UPRR      S - South of UPRR	South of UPRR



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## BAKERSFIELD SUBSECTION

